

## REMARKS

Claims 1-14 are pending in the present application and stand rejected. The Examiner's reconsideration is respectfully requested in view of the following remarks.

Claims 1, 3-5, 7, 8, 10-12 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Abbott (U.S. Patent No. 5,999,634) (hereinafter "Abbott") in view of Higashikubo (U.S. Patent No. 5,999,635) (hereinafter "Higashikubo").

Claims 2, 6, 9 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Abbott in view of Higashikubo, and further in view of M. Ostendorf and H. Singer, "HMM topology design using maximum likelihood successive state splitting" (hereinafter "Ostendorf"). The above rejections are respectfully traversed.

Claims 1 and 8 claim, *inter alia*, "estimating *geometric parameters* for representing *a scale variation of objects* in a given frame." The Office Action argues that Abbott "discloses in figure 1, and further discusses in the paragraph starting at column 1, line 17 a scaling technique for proper interpretation of the image." The Office Action further states that "[g]eometric parameters must be used to create such a scaling system."

It is unclear to Applicants which part of the recited portion of Abbott the Office Action is arguing discloses "estimating geometric parameters for representing a scaled variation of objects," as claimed in claims 1 and 8. In fact, the recited portion of Abbott is entirely unconcerned with the geometric parameters of *objects* in the image. The recited portion of Abbott discloses dividing an image into substantially equal cells or tiles.

Applicants respectfully assert that a division of an image into fixed-sized, arbitrary areas negates any potential argument that the recited portion of Abbott discloses "a scale variation of *objects*." That is, the recited portion of Abbott is entirely unconcerned with

geometric parameters of specific *objects* in the image when arbitrarily dividing the image into fixed-sized cells.

Further, Abbott discloses determining potential events by monitoring light intensity changes within each cell. (Abbott, col. 1, lines 31-33). Applicants further assert that by dividing an image into cells and monitoring light intensity changes of pixels within the cell, Abbott actually *teaches away* from the claimed invention. That is, because the recited portion of Abbott concerns itself with only changes of light intensity, it follows that Abbott would not use an apparatus, such as in the claimed invention, to estimate “*geometric parameters for representing a scale variation of objects in a given frame,*” as claimed in claims 1 and 8.

In light of the above, it should be noted that Applicants disagree with the statement of the Office Action that “[g]eometric parameters *must* be used to create such a scaling system.” Abbott monitors light intensity changes and does not concern itself with geometric parameters.

The Office Action further argues that the paragraph starting at col. 8, line 32 of Abbott discloses a “change detection map for distinguishing the background from objects in the given frame,” as claimed in claims 1 and 8. The recited portion of Abbott states the following:

The processing mechanisms previously defined show how each tile is assessed to see if it is Active. The determination of events in the scene can then be carried out by consideration of how the Activity values vary temporally and spatially.

As is clear from the above, nothing in the recited portion of Abbott discloses a “change detection *map* for distinguishing the background *from objects*.” More specifically, the recited portion of Abbott does not disclose a change detection *map*, and is concerned with only tiles/cells and not with *objects* in the image.

The Office Action further argues that “Higashikubo teaches in the paragraph starting at column 3, line 37 a congestion measuring method which takes into account geometric parameters (in this case the position of moving and congested vehicles) when computing congestion using the change detection map.” Again, Applicants are unclear which part of the recited portion of Higashikubo discloses “combining the *change detection map* with the *geometric parameters* to determine a measure of congestion of the given frame.” In particular, Higashikubo does not disclose a “change detection map” and “geometric parameters” of objects as claimed in claims 1 and 8.

Even assuming, *arguendo*, that the recited references disclose claims 1 and 8 as argued in the Office Action, it is respectfully asserted that one skilled in the art would not combine the disparate teachings of Abbott and Higashikubo in the manner suggested by the Office Action. Any suggestion to combine the references in the manner suggested by the Office Action can result from only improper hindsight reasoning.

Accordingly, claims 1 and 8 are believed to be patentably distinguishable over the combination of Abbott and Higashikubo. Dependent claims 2-7 and 9-14 are believed to be allowable for at least the reasons given for claims 1 and 8. Withdrawal of the claim rejections of claims 1-14 is respectfully requested.

In view of the foregoing remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable reconsideration is respectfully requested.

Respectfully submitted,

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